ABSTRACT

A spark ignition engine (2) has a fuel injector (8) in an intake port (7). An engine rotation speed sensor (9) detects the rotation speed of the engine (2). The controller (1) determines the target fuel injection amount of the fuel injector (8) during startup of the engine (2) by correcting the basic injection amount in response to the trend in the variation in the engine rotation speed. When the rotation speed of the engine (2) decreases, the controller (1) sets the target fuel injection amount to be smaller than when the rotation speed of the engine (2) is increasing at an identical rotation speed. As a result, effects on the air-fuel ratio related to wall flow relative to fluctuations in the rotation speed of the engine (2) are eliminated and the control accuracy of the air-fuel ratio of the engine (2) is improved.